State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY

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Title V Operating Permit

PERMIT NUMBER: 4500003001
DATE OF PERMIT: February 28, 2001
Date of Last Revision: February 28, 2001

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Dugway Proving Ground
Dept. of the Army
STEDP-EP-CR
Dugway, UT 84022-5000

Permitted Location:

U.S. Army-Dugway Proving Ground
STEDP-EP-CR
Dugway, UT 84022-5000

UTM coordinates: 4444300 meters Northing, 309300 meters Easting
SIC code: 9711

ABSTRACT

Dugway Proving Ground (DPG), a United States Army installation, is responsible for testing chemical and biological defense systems for the United States and its allies. The chemical and biological defense system testing is conducted at several facilities including the Combined Chemical Test Facility (CCTF), Bushnell Materiel Test Facility (MTF), and Lothram Salomon Life Science Test Facility (LSTF). Smoke and obscurant testing and open burn and open detonation (OB/OD) of munitions, propellants, explosives and pyrotechnics are conducted on the open ranges and in the OB/OD area. Equipment supporting these facilities and activities include boilers, heaters, generators, fuel storage tanks, degreasers, and fuel and chemical dispensing. A municipal landfill, sewage lagoons, housing, wood shop, airfield, and photographic processes are also present at DPG. DPG is a major source of PM_{10}, SO_2, NO_x, CO, and VOC. Six fuel storage tanks are subject to 40 CFR 60, Subpart Kb, and four boilers are subject to 40 CFR 60, Subpart Dc.

UTAH AIR QUALITY BOARD

By:

Richard W. Sprott, Executive Secretary

Prepared By:

Dave Hansell

Operating Permit History

2/28/2001 - Permit issued	Action initiated by an initial operating permit application	

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: GENERAL PROVISIONS

I.A. **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. **Permit Expiration and Renewal.**

I.D.1 **This permit is issued for a fixed term of five years and expires on February 28, 2006.** (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by August 28, 2005. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. **Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than October 10, 2001

and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N. **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P. **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q. **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii)

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 14 days for all emission units listed in Section II.A of this permit except emission units included with SOT, CCTF-0, OBOD-0, MTF-0, LSTF-0, and LNCTF-0. Prompt, as used in this condition, shall be defined as written notification within 2 days for emission units included with SOT, CCTF-0, OBOD-0, MTF-0, LSTF-0, and LNCTF-0.** Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications	For reports, notifications, or other correspondence related to permit modifications, applications, etc.
Environmental Protection Agency, Region VIII Office of Enforcement, Compliance and Environmental Justice (mail code 8ENF) 999 18th Street, Suite 300 Denver, CO 80202-2466	Environmental Protection Agency, Region VIII Office of Partnerships & Regulatory Assistance Air & Radiation Program (mail code 8P-AR) 999 18th Street, Suite 300 Denver, CO 80202-2466 Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. Inventory Requirements.

I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

Section II: SPECIAL PROVISIONS

II.A. **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Gas-Fired Boilers and Heaters** (designated as ECG-0)
Unit Description: All natural gas- or liquified petroleum gas-fired boilers and heaters irrespective of installation date or size rating. This group includes but is not limited to emission units ECG-1.

II.A.1.a **MTF Propane-Fired Boilers** (designated as ECG-1)
Unit Description: Two low-NOx (40 ppm) boilers rated at 10.5 MMBtu/hr each. These units are subject to 40 CFR 60 Subpart Dc and are located at the Bushnell Materiel Test Facility (MTF).

II.A.2 **Oil-Fired Boilers and Heaters** (designated as ECO-0)
Unit Description: All oil-fired boilers and heaters irrespective of installation date or size rating. This group includes but is not limited to emission units ECO-1 through 3.

II.A.2.a **CCTF Bldg. 4156 Diesel-Fired Boilers** (designated as ECO-1)
Unit Description: Two low-NOx, diesel-fired boilers rated at 10.5 MMBtu/hr each. These units are subject to 40 CFR 60 Subpart Dc and are located at the Combined Chemical Test Facility (CCTF).

II.A.2.b **CCTF Bldg. 4165 Diesel-Fired Boilers** (designated as ECO-2)
Unit Description: Two low-NOx, diesel-fired boilers rated at 5.3 MMBtu/hr each. These units are located at the CCTF.

II.A.2.c **LSTF Diesel-Fired Boilers** (designated as ECO-3)
Unit Description: Two low-NOx boilers rated at 150 and 200 Hp. These units are located at the Lothram Salomon Life Science Test Facility (LSTF).

II.A.3 **Oil-Fired Internal Combustion Engines** (designated as ICO-0)
Unit Description: All oil-fired internal combustion engines, except gasoline-fired, irrespective of manufacture date or size rating. This group includes but is not limited to emission units ICO-1 through 6.

II.A.3.a **CCTF Diesel-Fired Emergency Generators** (designated as ICO-1)
Unit Description: Three diesel-fired emergency generators rated at 1000, 65, and 45 kW. These units are located at the CCTF.

II.A.3.b **MTF Diesel-Fired Emergency Generator** (designated as ICO-2)
Unit Description: One diesel-fired emergency generator rated at 1000 kW. This unit is located at the MTF.

II.A.3.c **MTF Diesel-Fired Booster Pump** (designated as ICO-3)
Unit Description: Diesel-fired booster pump rated at 244 Hp for the fire suppression system. This unit is located at the MTF.

II.A.3.d **LSTF Diesel-Fired Emergency Generator** (designated as ICO-4)
Unit Description: Diesel-fired emergency generator rated at 1000 kW. This unit is located at the LSTF.

II.A.3.e **LNCTF Diesel-Fired Generators** (designated as ICO-5)
Unit Description: Two diesel-fired generators rated at 80 and 200 kW. These units are located at the Liquid Nitrogen Cryogenic Test Facility (LNCTF).

II.A.3.f **Carr Diesel-Fired Emergency Generator** (designated as ICO-6)
Unit Description: One diesel-fired emergency generator rated at 1100 kW. This unit is located at building 3342 of the Carr Facility.

II.A.4 **Propane-Fired Internal Combustion Engines** (designated as ICP-0)

Unit Description: All propane-fired internal combustion engines irrespective of manufacture date or size rating. This group includes but is not limited to emission units ICP-1.

II.A.4.a **MTF Propane-Fired Emergency Generator** (designated as ICP-1)

Unit Description: Propane-fired emergency generator rated at 30 kW for the guard house. This unit is located at the MTF.

II.A.5 **Gasoline-Fired Internal Combustion Engines** (designated as ICG-0)

Unit Description: All stationary gasoline-fired internal combustion units irrespective of manufacture date or size rating.

II.A.6 **Smoke and Obscurant Testing** (designated as SOT)

Unit Description: Outdoor test materials such as obscurants, smokes, interferents, and tracers are disseminated by various means including but not limited to smoke generators, aircraft, or grenades.

II.A.7 **Combined Chemical Test Facility (CCTF)** (designated as CCTF-0)

Unit Description: Operations with various chemical agents and non-agents are conducted at the Combined Chemical Test Facility (CCTF) in buildings 4156 and 4165. The CCTF includes emission units CCTF 1 and 2.

II.A.7.a **CCTF Bldg. 4156 Chemical Agent Rooms** (designated as CCTF-1)

Unit Description: Chemical agent operations are conducted in rooms 13, 16, 27, 30, 34-37, 45, 46, 60- 63, 68, 71 and 74 in bldg. 4156. Air from each room is exhausted to the atmosphere through fume hoods equipped with HEPA, carbon, carbon, and HEPA filters in series.

II.A.7.b **CCTF Bldg. 4165 Chemical Agent Rooms** (designated as CCTF-2)

Unit Description: Chemical agent operations are conducted in rooms 14, 20, 28, 29 and 30 in bldg. 4165. Air from each room is exhausted to the atmosphere through fume hoods equipped with HEPA, carbon, carbon, and HEPA filters in series.

II.A.8 **Open Burn/Open Detonation (Source Wide)** (designated as OBOD-0)

Unit Description: Open burning (OB) and open detonation (OD) of residual munitions and propellants, explosives, and pyrotechnics (PEP) is conducted in the OB/OD area and on the open ranges.

II.A.8.a **Open Burn in OB/OD Area** (designated as OBOD-1)

Unit Description: OB in the OB/OD area is conducted to destroy solid propellant, propellant charges, and bulk explosives.

II.A.8.b **Open Detonation in OB/OD Area** (designated as OBOD-2)

Unit Description: OD in the OB/OD area is used to destroy conventional range recovered munitions, residual explosive material housed in munitions, hung ordinance, solid propellants and obscurant where the explosive and nonexplosive components cannot be safely separated.

II.A.8.c **Open Detonation on Open Range** (designated as OBOD-3)

Unit Description: Due to safety concerns, some munitions must be destroyed in place. In these instances, explosives ordnance experts use Department of Defense approved procedures best suited to the specific circumstances.

II.A.9 **Bushnell Materiel Test Facility (MTF)** (designated as MTF-0)

Unit Description: The Bushnell Materiel Test Facility (MTF) is used to test military hardware under varied exposure conditions including direct exposure to chemical agents and non-agents. The MTF includes emission units MTF 1 through 8.

II.A.9.a **MTF Test Chambers** (designated as MTF-1)

Unit Description: Operations with chemical agents and non-agents are conducted in the Multi-Purpose Chamber (MPC), Agent Transfer Chamber (ATC), and Closed System Chamber (CSC). Chamber air emissions are controlled by the Pollution Abatement System (PAS).

II.A.9.b **MTF Multi-Purpose Chamber (MPC)** (designated as MTF-2)
Unit Description: The MPC is a welded stainless steel chamber connected to 5 air locks. Air emissions are controlled by Pollution Abatement System (PAS). Exhaust gas from combustion devices controlled by Thermal Pollution Abatement Device (TPAD).

II.A.9.c **MTF Agent Transfer Chamber (ATC)** (designated as MTF-3)
Unit Description: The ATC is a welded stainless steel floored chamber with interlocking galvanized coated aluminum walls and ceiling connected to 6 air locks. Air emissions are controlled by the PAS. The agent repository (AR) connects to this chamber.

II.A.9.d **MTF Closed System Chamber (CSC)** (designated as MTF-4)
Unit Description: The CSC is a welded stainless steel floored chamber with interlocking galvanized coated aluminum walls and ceiling connected to 5 air locks. Air emissions are controlled by the PAS.

II.A.9.e **MTF Agent Repository (AR)** (designated as MTF-5)
Unit Description: The AR stores up to 500 kg of chemical agents. Air emissions are controlled by the PAS or redundant pollution abatement system (RPAS). The AR is attached to the ATC.

II.A.9.f **MTF Pollution Abatement System (PAS)** (designated as MTF-6)
Unit Description: The PAS includes a pre-filter, HEPA filter, five carbon filters, and a HEPA filter in series. Each filter bank contains 36 filter elements (6 high by 6 wide). The system has two fans and a maximum design flow rate of 36,000 cfm.

II.A.9.g **MTF Redundant Pollution Abatement System (RPAS)** (designated as MTF-7)
Unit Description: The RPAS includes a pre-filter, HEPA filter, two carbon filters, and HEPA filter in series. The system has a flow rate of 160 cfm.

II.A.9.h **MTF Thermal Pollution Abatement Device** (designated as MTF-8)
Unit Description: The TPAD is a propane-fired incinerator rated at 4.4 MMBtu/hr with a quench tower.

II.A.10 **Lothram Salomon Life Science Test Facility (LSTF)** (designated as LSTF-0)
Unit Description: The Lothram Salomon Life Science Test Facility (LSTF) is used to conduct operations with biosafety level (BL) 1, 2, and 3 agents as defined in Center for Disease Control publication No. 93-8395. The LSTF includes emission units LSTF 1 through 4.

II.A.10.a **LSTF Containment Area (CA)** (designated as LSTF-1)
Unit Description: The containment area (CA) includes rooms 506, 508, 509, 910, 911 and 913, equipment area 912, corridors 800 and 900, and air break 801. BL3 operations are conducted in Class II or III BSCs and air emissions are controlled by the CA ventilation system.

II.A.10.b **LSTF CA Ventilation System** (designated as LSTF-2)
Unit Description: All air emissions from the containment area are vented through a ventilation system which includes six parallel banks each bank containing a prefilter and a HEPA filter.

II.A.10.c **LSTF Class II Biological Safety Cabinet (BSC)** (designated as LSTF-3)

Unit Description: Class II Biological Safety Cabinets (BSCs) are used as containment devices when working with infectious agents. These cabinets have an open front with inward air flow and air emissions are HEPA filtered (see 32 CFR 627.51).

II.A.10.d **LSTF Class III Biological Safety Cabinet (BSC)** (designated as LSTF-4)
Unit Description: Class III BSCs are used as containment devices when working with infectious agents. They are fully enclosed with a double HEPA filter and operations are conducted through secondary means such as attached gloves and/or half suits (see 32 CFR 627.52).

II.A.11 **Liquid Nitrogen Cryofracture Test Facility (LNCTF)** (designated as LNCTF-0)
Unit Description: The Liquid Nitrogen Cryofracture Test Facility (LNCTF) is used to test technology for destroying small conventional munitions such as land mines. The LNCTF includes emission units LNCTF 1 through 3.

II.A.11.a **LNCTF Liquid Nitrogen Cryobath** (designated as LNCTF-1)
Unit Description: The cryobath is used to cool munitions with liquid nitrogen and is located on rails to permit movement relative to the munitions handling robot. The cryobath is housed in a 50 by 50 by 30 foot building. No unit-specific applicable requirements.

II.A.11.b **LNCTF Liquid Nitrogen Storage Tank** (designated as LNCTF-2)
Unit Description: 10,000 gallon liquid nitrogen storage tank. No unit-specific applicable requirements.

II.A.11.c **LNCTF Propane-Fired Furnace** (designated as LNCTF-3)
Unit Description: Propane-fired open-grate furnace rated at 2 MMBtu/hr. Fragments from munitions including explosive material and casing are burned on the open grate.

II.A.12 **Municipal Solid Waste Landfill** (designated as MSWL)
Unit Description: The municipal solid waste landfill is located west of Fries Park. The landfill design capacity is less than 2.5 million megagrams. No unit-specific applicable requirements.

II.A.13 **Underground Storage Tanks** (designated as TNK-1)
Unit Description: Four 20,000 gallon underground Fuel Oil No. 2 storage tanks. Three tanks are located at the Baker facility and one tank is located at the Ditto facility.

II.A.14 **Aboveground Storage Tanks** (designated as TNK-2)
Unit Description: Two 24,000 gallon aboveground JP-4 storage tanks located at the Michael Army Airfield.

II.B. Requirements and limitations.

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide):**

II.B.1.a Sulfur content of any oil combusted shall be no greater than 0.85 lbs sulfur per MMBTU unless otherwise specified in this permit. [Authority granted under R307-203-1(1); condition originated in R307-203-1(1)]

II.B.1.a.1 **Monitoring**: The following specifications shall be recorded for each purchase of fuel: weight percent sulfur, gross heating value (Btu per unit volume), and density. All specifications shall be ascertained in accordance with methods of American Society for Testing and Materials.

Sulfur content in lbs/MMBtu shall be determined by the following equation:
S lbs/MMBtu = [(Weight percent sulfur/100) x Density (lb/gal)] / [(gross heating value (Btu/gal)) x (1 MMBtu/1,000,000 Btu)]

The permittee may obtain the above specifications by testing each purchase of fuel in accordance with the required methods; by inspection of the specifications provided by the vendor for each purchase of fuel; or by inspection of summary documentation of the fuel sulfur content from the vendor, provided that the above specifications are available from the vendor for each purchase if requested.

II.B.1.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.1.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b Emissions from sources of fugitive dust shall be minimized. [Authority granted under R307-205-3; condition originated in R307-205-3]

II.B.1.b.1 **Monitoring**: The permittee shall develop and implement a fugitive dust control plan, approved by the Executive Secretary, that minimizes fugitive dust. The permittee shall perform monitoring as described in the fugitive dust control plan.

II.B.1.b.2 **Recordkeeping**: Records required by the most recently approved fugitive dust control plan shall be maintained in accordance with the plan and section I.S.1 of this permit.

II.B.1.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.c The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Authority granted under 40 CFR 82.150(b); condition originated in 40 CFR 82 Subpart F]

II.B.1.c.1 **Monitoring**: The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.c.2 **Recordkeeping**: All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.c.3 **Reporting**: All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.d The permittee shall comply with the applicable requirements for labeling of products using ozone depleting substance pursuant to 40 CFR 82, Subpart E - Labeling of Products Using Ozone-Depleting Substances.. [Authority granted under 40 CFR 82.102; condition originated in 40 CFR 82 Subpart F]

II.B.1.d.1 **Monitoring**: The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart E.

II.B.1.d.2 **Recordkeeping**: All records required in 40 CFR 82, Subpart E shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.d.3 **Reporting**: All reports required in 40 CFR 82, Subpart E shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.2 **Conditions on Gas-Fired Boilers and Heaters (ECG-0):**

II.B.2.a Visible emissions shall be no greater than 20 percent opacity for affected emission units constructed after April 25, 1971. [Authority granted under R307-201-1(2); condition originated in DAQE-390-00]

II.B.2.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.2.a.2 **Recordkeeping**: In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn natural gas and/or liquified petroleum gas;
(2) Documentation that the fuels other than natural gas and/or liquified petroleum gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only natural gas and/or liquified petroleum gas are combusted in the emission unit.

The permittee shall keep a log which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b Visible emissions shall be no greater than 40 percent opacity for affected emission units constructed prior to April 25, 1971. [Authority granted under R307-305-1(1); condition originated in R307-305-1(1)]

II.B.2.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.2.b.2 **Recordkeeping**: In lieu of monitoring via visible emission observations, the permittee shall keep one of the following sets of records for each affected emission unit, as applicable:

(1) Documentation that the emission unit can only burn natural gas and/or liquified petroleum gas;
(2) Documentation that the fuels other than natural gas and/or liquified petroleum gas cannot be supplied to the emission unit without modification of the fuel supply system; or
(3) Fuel bills or fuel meter readings that demonstrate only natural gas and/or liquified petroleum gas are combusted in the emission unit.

The permittee shall keep a log which includes the location and description of each affected emission unit. For each affected emission unit the log shall include the type of records that will be used in lieu of monitoring via visible emission observations. If fuel bills or fuel meter readings will be used in lieu of monitoring via visible emission observations, the permittee shall review fuel bills or fuel meter readings once per quarter and record in the log the types of fuel combusted. The records and log required by this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c The permittee shall comply with all applicable requirements of 40 CFR 60 Subpart A for each of the MTF propane-fired boilers. [Authority granted under 40 CFR 60 (Subpart A); condition originated in DAQE-390-00]

II.B.2.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.2.c.2 **Recordkeeping**: In accordance with 40 CFR 60.7(b), the permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of affected emission unit; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. These records and all other applicable records and notifications required by 40 CFR 60 Subpart A shall be maintained in accordance with provision I.S.1 of this permit. (origin: 40 CFR Subpart A)

II.B.2.c.3 **Reporting**: The permittee shall comply with the reporting requirements in Section I of this permit and any additional reporting and notification requirements of 40 CFR 60 Subpart A. (origin: 40 CFR 60 Subpart A)

II.B.2.d The permittee shall keep daily records of the amounts of each fuel combusted each day for each of the MTF propane-fired boilers. [Authority granted under 40 CFR 60.48c(g); condition originated in DAQE-390-00]

II.B.2.d.1 **Monitoring**: Fuel consumption for each affected emission unit shall be determined by a fuel meter and/or log.

II.B.2.d.2 **Recordkeeping**: Records of the amounts of each fuel combusted during each day for each

affected unit shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.d.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.e At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the MTF propane-fired boilers, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5 and 40 CFR 60.11(d); condition originated in DAQE-390-00]

II.B.2.e.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.2.e.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.e.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on Oil-Fired Boilers and Heaters (ECO-0):**

II.B.3.a Sulfur content of any oil combusted shall be no greater than 0.5 percent by weight for the CCTF Bldg. 4165 diesel-fired boilers and LSTF diesel-fired boilers. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.3.a.1 **Monitoring**: The fuel sulfur weight percent (wt%) shall be recorded for each delivery of fuel to the affected emission units. The fuel sulfur wt% shall be ascertained in accordance with methods of the American Society for Testing Materials. For purposes of demonstrating compliance with the fuel sulfur wt% limitation, the permittee may test each delivery of fuel in accordance with the required method; inspect the specifications provided by the vendor for each delivery of fuel; or inspect summary documentation of the fuel sulfur content from the vendor for each delivery, provided that the fuel sulfur wt% is available from the vendor for each delivery, if requested.

II.B.3.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.3.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.b Visible emissions shall be no greater than 20 percent opacity for affected emission units constructed after April 25, 1971. [Authority granted under R307-201-1(2); condition originated in DAQE-390-00]

II.B.3.b.1 **Monitoring**: If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the

emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.3.b.2 **Recordkeeping**: The permittee shall keep a log which includes the location and description of each affected emission unit. For each quarter for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date of opacity determination, and percent opacity. The records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.c Visible emissions shall be no greater than 40 percent opacity for affected emission units constructed before April 25, 1971. [Authority granted under R307-305-1(1); condition originated in R307-305-1(1)]

II.B.3.c.1 **Monitoring**: If an affected emission unit is operated during a semi-annual period, an opacity observation of the emission unit shall be performed in the semi-annual period that the emission unit was operated. The opacity observation can be conducted at anytime during the semi-annual period. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.3.c.2 **Recordkeeping**: The permittee shall keep a log which includes the location and description of each affected emission unit. For each semi-annual period for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date of opacity determination, and percent opacity. The records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.c.3	**Reporting**:	There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.d Hours of operation other than startup and shutdown shall be no greater than 8760 hours per rolling 12 month period for the combined total of the LSTF diesel-fired boilers. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.3.d.1	**Monitoring**:	By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for each affected emission unit or all affected emission units, as applicable. Hours of operation for each affected emission unit shall be determined by an hour meter and/or a log.
II.B.3.d.2	**Recordkeeping**:	Records shall be kept on a monthly basis for each affected emission unit during operations. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.3.d.3	**Reporting**:	There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.e Sulfur content of any oil combusted shall be no greater than 0.5 percent by weight for the CCTF Bldg. 4156 diesel-fired boilers. [Authority granted under 40 CFR 60.42c(d) and (i); condition originated in DAQE-390-00]

II.B.3.e.1	**Monitoring**:	For each affected emission unit, the permittee shall comply with the following: a. For fuel shipment sampling, the requirements of 40 CFR 60.42c(g), 60.44c(a), 60.44c(g), 60.46c(a) and 60.46c(d)(2); or b. For fuel supplier certification, the requirements of 40 CFR 60.42c(g), 60.42c(h), 60.44c(a), 60.44c(h), 60.46c(a) and 60.46c(e).
II.B.3.e.2	**Recordkeeping**:	For each affected emission unit, the permittee shall comply with the following: b.1 For fuel shipment sampling, the requirements of 40 CFR 60.48c(e)(1) and (2); or b.2. For fuel supplier certification, the requirements of 40 CFR 60.48c(e)(1) and (11). For each reporting period and each affected emission unit, the permittee shall record the monitoring approach used. These records and the records required by provision I.S.1 of this permit shall be maintained in accordance with provision I.S.1 of this permit.
II.B.3.e.3	**Reporting**:	In addition to the reporting requirements specified in Section I of this permit, the permittee shall comply with the following for each affected emission unit:

b.1 For fuel shipment sampling, the requirements of 40 CFR 60.48c(d), 60.48c(e)(1) and (2), and 60.48c(j); or

b.2. For fuel supplier certification, the requirements of 40 CFR 60.48c(d), 40 CFR 60.48c(e)(1) and (11), and 60.48c(j). (origin: 40 CFR 60.48c(d), (e), (j))

II.B.3.f The permittee shall comply with all applicable requirements of 40 CFR 60 Subpart A for each of the CCTF Bldg. 4156 diesel-fired boilers. [Authority granted under 40 CFR 60 (Subpart A); condition originated in DAQE-390-00]

II.B.3.f.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.3.f.2 **Recordkeeping**: In accordance with 40 CFR 60.7(b), the permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of affected emission unit; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. These records and all other applicable records and notifications required by 40 CFR 60 Subpart A shall be maintained in accordance with provision I.S.1 of this permit. (origin: 40 CFR Subpart A)

II.B.3.f.3 **Reporting**: The permittee shall comply with the reporting requirements in Section I of this permit and any additional reporting and notification requirements of 40 CFR 60 Subpart A. (origin: 40 CFR 60 Subpart A)

II.B.3.g The permittee shall keep daily records of the amounts of each fuel combusted each day for each of the CCTF Bldg. 4156 diesel-fired Boilers. [Authority granted under 40 CFR 60.48c(g); condition originated in DAQE-390-00]

II.B.3.g.1 **Monitoring**: Fuel consumption for each affected emission unit shall be determined by a fuel meter and/or log.

II.B.3.g.2 **Recordkeeping**: Records of the amounts of each fuel combusted during each day for each affected unit shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.g.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.h At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the CCTF Bldg. 4156 and 4165 diesel-fired boilers and LSTF diesel-fired boilers, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5 and 40 CFR 60.11(d); condition originated in DAQE-390-00]

II.B.3.h.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.3.h.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation

and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.h.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Oil-Fired Internal Combustion Engines (ICO-0):**

II.B.4.a Sulfur content of any oil combusted shall be no greater than 0.5 percent by weight for diesel-fired internal combustion engines ICO-1 through 6. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.4.a.1 **Monitoring**: The fuel sulfur weight percent (wt%) shall be recorded for each delivery of fuel to the affected emission units. The fuel sulfur wt% shall be ascertained in accordance with methods of the American Society for Testing Materials. For purposes of demonstrating compliance with the fuel sulfur wt% limitation, the permittee may test each delivery of fuel in accordance with the required method; inspect the specifications provided by the vendor for each delivery of fuel; or inspect summary documentation of the fuel sulfur content from the vendor for each delivery, provided that the fuel sulfur wt% is available from the vendor for each delivery, if requested.

II.B.4.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.4.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b Visible emissions shall be no greater than 20 percent opacity for affected emission units manufactured after January 1, 1973, except for operation not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(4); condition originated in DAQE-390-00]

II.B.4.b.1 **Monitoring**: If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.4.b.2 **Recordkeeping**: The permittee shall keep a log which includes the location and description of each affected emission unit. For each quarter for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date of opacity determination, and percent opacity. The records

required by this provision and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c Visible emissions shall be no greater than 40 percent opacity for affected emission units manufactured before January 1, 1973, except for operation not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(5); condition originated in R307-201-1(5)]

II.B.4.c.1 **Monitoring**: If an affected emission unit is operated during a semi-annual period, an opacity observation of the emission unit shall be performed in the semi-annual period that the emission unit was operated. The opacity observation can be conducted at anytime during the semi-annual period. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial visual emission observation. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.4.c.2 **Recordkeeping**: The permittee shall keep a log which includes the location and description of each affected emission unit. For each semi-annual period for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date of opacity determination, and percent opacity. The records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9 shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.d Diesel consumption shall be no greater than 6200 gallons per rolling 12-month period for the combined total of the LNCTF diesel-fired generators. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.4.d.1 **Monitoring**: By the 15th day of each month, the permittee shall calculate the total volume of fuel consumed in the previous 12 months. Fuel consumption for each affected emission unit shall be determined by a fuel meter and/or log.

II.B.4.d.2 **Recordkeeping**: Records of fuel consumption shall be kept on a monthly basis for each affected emission unit. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.4.d.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Gasoline-Fired Internal Combustion Engines (ICG-0):**

II.B.5.a For each affected emission unit, the permittee shall not allow, cause or permit the emissions of visible contaminants except for stationary operation not exceeding 3 minutes in any hour. [Authority granted under R307-201-1(3); condition originated in R307-201-1(3)]

II.B.5.a.1 **Monitoring**: If an affected emission unit is operated during a quarter, an opacity observation of the emission unit shall be performed in the quarter that the emission unit was operated. The opacity observation can be conducted at anytime during the quarter. The opacity observation shall be conducted by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9, while the emission unit is operating. If visible emissions other than condensed water vapor are observed from the emission unit, Method 203B (58 FR 61640) shall be performed by a certified observer within 24 hours of the initial visual emission observation.

II.B.5.a.2 **Recordkeeping**: The permittee shall keep a log which includes the location and description of each affected emission unit. For each quarter for each affected emission unit, the log shall include either the date of the opacity observation and if visual emission other than condensed water vapor were observed or a note that the emission unit was not operated. For each observed visual emission other than condensed water vapor the permittee shall record: date and time of visual emission observation, emission unit location and description, time and date Method 203B conducted, and Method 203B results. The records required by this provision and all data required by 58 FR 61640 Method 203B shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6 **Conditions on Smoke and Obscurant Testing (SOT):**

II.B.6.a The smoke and obscurant testing shall be performed at a location such that the intended actual point of release is not closer than 2 km from the boundary of property comprising Dugway Proving Ground or which Dugway has legal use agreement. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.6.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.6.a.2 **Recordkeeping**: For each test, the permittee shall record that no point of release was closer than 2 km from the boundary of property comprising Dugway Proving Ground (DPG) or for which DPG has a legal use agreement. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.6.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.b i. The permittee shall submit an annual plan of smoke and obscurant tests for planned releases to be performed in the upcoming year (federal fiscal year beginning October 1) for approval of test parameters no later than June 30. The plan shall include all tests which may result in the release of air contaminants into the atmosphere and the following information:

a. Name of each test and materials which may be released into the air.

b. Maximum quantities which may be released.

c. Maximum rates of release (quantity per hour).

d. Projected dates of release.

e. Indication of relative toxicity and pertinent regulatory criteria for each material.

f. For each material - threshold limit values (TLV) and short-term exposure limits (STEL) if they have such limits.

ii. The permittee shall also update the annual plan, as needed, in advance of the test execution. Any updates shall be submitted to the Executive Secretary. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.6.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.6.b.2 **Recordkeeping**: The permittee shall maintain the following records for each test:

a. Purpose of the test.

b. Start and end date of test.

c. Names (common and chemical names and formulas) and quantities of each material used.

d. Names (common and chemical names) and quantities of each pollutant released. The names of reaction products, extrapolated from chemical modeling, shall be provided in instances where chemical alteration of test material occurred.

The permittee shall maintain these records and a copy of each submittal required by this permit condition in accordance with Provision I.S.1 of this permit.

II.B.6.b.3 **Reporting**: In addition to the reporting requirements specified in Section I of this permit, the permittee shall submit within 30 days of the end of each quarter a report that includes the following information:

a. A list of actions accomplished.

b. A brief description of each test, including the following:

b.1 Purpose of the test.

b.2 Names (common and chemical names and formulas) and quantities of each material used.

b.3 Names (common and chemical names) and quantities of each pollutant released. The names of reaction products, extrapolated from

chemical modeling, shall be provided in instances where chemical alteration of test material occurred.

c. The results of environmental monitoring at the Dugway border, when performed, including measured concentrations.

II.B.7 **Conditions on Combined Chemical Test Facility (CCTF) (CCTF-0):**

II.B.7.a Except when chemical agents are being transported in a double containment system, chemical agents shall only be present at the affected emission unit in the chemical agent rooms identified in this permit. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.7.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.7.a.2 **Recordkeeping**: The permittee shall keep a log of the rooms where chemical agents are present at the affected emission unit. The log shall be reviewed at least once each day that operations are conducted and updated, if necessary, each time chemical agents are moved between rooms at the affected emission unit. The log shall include the date and time the inventory of chemical agents was revised and if any chemical agents were not present in a chemical agent room, except when chemical agents are being transported in a double containment system. The records shall be maintained in accordance with provisions of Section I.S.1 of this permit.

II.B.7.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.7.b At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5; condition originated in DAQE-390-00]

II.B.7.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.7.b.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.7.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8 **Conditions on CCTF Bldg. 4156 Chemical Agent Rooms (CCTF-1):**

II.B.8.a For each chemical agent room at the affected emission unit the following provisions shall apply:

a. The air pressure will be maintained at least 0.05 inches of water lower than that of each adjacent space when chemical agents are present;

b. Each fume hood shall have an average face velocity greater than 90 linear feet per minute (lfpm) through the working opening when chemical agents are present;

c. Chemical agent contaminated equipment/supplies shall be inside a fume hood and at least 20 cm away from the fume hood face;

d. During chemical agent operations all doors shall be closed; and

e. The carbon filters on a fume hood shall be replaced when chemical agent is detected between the first and second carbon filters at a concentration determined by Army but which will not exceed the Source Emission Limit(s) for chemical agents in AR 385-61, Table 2-3. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.8.a.1 **Monitoring**: The permittee shall conduct the following monitoring for each chemical agent room at the affected emission unit.

a. Instantaneous when chemical agents present

Each fume hood will be equipped with an audible alarm which will instantaneously (within at least 15 seconds) give a warning if the average face velocity is less than 90 lfpm. When chemical agent is present, the alarm on each fume hood shall be operational.

b. Once per day during chemical agent operations

During each day that chemical agent operations are conducted, the permittee shall sample the exhaust air from each fume hood being used for chemical agent operations between the first and second carbon filters using Depot Area Air Monitoring Systems (DAAMS). By the end of the next business day, the DAAMS solid sorbent tube will be analyzed for chemical agents . If any chemical agent is detected above a concentration determined by Army (concentration will not exceed the Source Emission Limit(s) for chemical agents in AR 385-61, Table 2-3) the first and second filters shall be replaced.

c. Semi-annual when chemical agent present.

The following shall be performed at least once per semi-annual period when chemical agents are present during the semi-annual period and prior to conducting chemical agent operations after major repairs:

c.1 The difference in air pressure between the room and each adjacent space shall be monitored;

c.2 The average face velocity of each fume hood shall be computed by conducting a traverse of one measurement per square foot. No reading may deviate from the average face velocity by more than 20%. The velocity measurements shall be conducted with the fume hood face full open; and

c.3 Each fume hood audible alarm shall be tested to ensure proper operation.

II.B.8.a.2 **Recordkeeping**: The permittee shall maintain the following logs for each chemical agent room at the affected emission unit.

a. For each semi-annual period a log shall be maintained which includes the following information:

a.1 Room identification;
a.2 Date and time the semi-annual period started and ended;
a.3 One of the following:
i. No chemical agent present over the semi-annual period;
ii Chemical agent present at all times during the semi-annual period; or
iii Start and end date and time of each time period when chemical agents present;

Note: Only include the following information if chemical agents were present at any time during the semi-annual period

a.4 Was the alarm on each fume hood operational for each time period when chemical agents were present;
a.5 Average face velocity and results of the alarm evaluation for each fume hood. Each result shall be listed with the fume hood identification and measurement date; and
a.6 Pressure difference between the room and each adjacent space. Each pressure difference shall be listed with the measurement locations and measurement date.

b. For each day that chemical agent operations are conducted a log shall be maintained which includes the following information for each room in which chemical agent operations were conducted:

b.1 Room identification;
b.2 Date;
b.3 Were all doors to the room closed during each chemical agent operation conducted over the day?;
b.4 Were all chemical agent contaminated equipment/supplies inside fume hoods at least 20 cm away from the fume hood face; and
b.5 Was a DAAMS sample collected for each fume hood (only those fume hoods where chemical agent operations were conducted) between first and second carbon filter and sent to be analyzed for chemical agents?

These records shall be maintained as described in Provision I.S.1.

II.B.8.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9 **Conditions on CCTF Bldg. 4165 Chemical Agent Rooms (CCTF-2):**

II.B.9.a For each chemical agent room at the affected emission unit the following provisions shall apply:

a. The air pressure will be maintained at least 0.05 inches of water lower than that of each adjacent space when chemical agents are present;

b. Each fume hood shall have an average face velocity greater than 90 linear feet per minute (lfpm) through the working opening when chemical agents are present;

c. Chemical agent contaminated equipment/supplies shall be inside a fume hood and at least 20 cm away from the fume hood face;

d. During chemical agent operations all doors shall be closed; and

e. The carbon filters on a fume hood shall be replaced when chemical agent is detected between the first and second carbon filters at a concentration determined by Army but which will not exceed the Source Emission Limit(s) for chemical agents in AR 385-61, Table 2-3. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.9.a.1 **Monitoring**: The permittee shall conduct the following monitoring for each chemical agent room at the affected emission unit.

a. Instantaneous when chemical agents present

Each fume hood will be equipped with an audible alarm which will instantaneously (within at least 15 seconds) give a warning if the average face velocity is less than 90 lfpm. When chemical agent is present, the alarm on each fume hood shall be operational.

b. Once per day during chemical agent operations

During each day that chemical agent operations are conducted, the permittee shall sample the exhaust air from each fume hood being used for chemical agent operations between the first and second carbon filters using Depot Area Air Monitoring Systems (DAAMS). By the end of the next business day, the DAAMS solid sorbent tube will be analyzed for chemical agents . If any chemical agent is detected above a concentration determined by Army (concentration will not exceed the Source Emission Limit(s) for chemical agents in AR 385-61, Table 2-3) the first and second filters shall be replaced.

c. Semi-annual when chemical agent present.

The following shall be performed at least once per semi-annual period when chemical agents are present during the semi-annual period and prior to conducting chemical agent operations after major repairs:

c.1 The difference in air pressure between the room and each adjacent space shall be monitored;

c.2 The average face velocity of each fume hood shall be computed by conducting a traverse of one measurement per square foot. No reading may deviate from the average face velocity by more than 20%. The velocity measurements shall be conducted with the fume hood face full open; and

c.3 Each fume hood audible alarm shall be tested to ensure proper operation.

II.B.9.a.2 **Recordkeeping**: The permittee shall maintain the following logs for each chemical agent room at the affected emission unit.

a. For each semi-annual period a log shall be maintained which includes the following information:

a.1 Room identification;
a.2 Date and time the semi-annual period started and ended;
a.3 One of the following:
i. No chemical agent present over the semi-annual period;
ii Chemical agent present at all times during the semi-annual period; or
iii Start and end date and time of each time period when chemical agents present;

Note: Only include the following information if chemical agents were present at any time during the semi-annual period

a.4 Was the alarm on each fume hood operational for each time period when chemical agents were present;
a.5 Average face velocity and results of the alarm evaluation for each fume hood. Each result shall be listed with the fume hood identification and measurement date; and
a.6 Pressure difference between the room and each adjacent space. Each pressure difference shall be listed with the measurement locations and measurement date.

b. For each day that chemical agent operations are conducted a log shall be maintained which includes the following information for each room in which chemical agent operations were conducted:

b.1 Room identification;
b.2 Date;
b.3 Were all doors to the room closed during each chemical agent operation conducted over the day?;
b.4 Were all chemical agent contaminated equipment/supplies inside fume hoods at least 20 cm away from the fume hood face; and
b.5 Was a DAAMS sample collected for each fume hood (only those fume hoods where chemical agent operations were conducted) between first and second carbon filter and sent to be analyzed for chemical agents?

These records shall be maintained as described in Provision I.S.1.

II.B.9.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10 **Conditions on Open Burn/Open Detonation (Source Wide) (OBOD-0):**

II.B.10.a Open burn (OB) and open detonation (OD) of residual munitions and propellants, explosives, and pyrotechnics (PEP) at the affected emission unit shall be conducted in the OB/OD area unless in-place OD on the open range is necessary for safety reasons and is authorized by the Utah Division of Solid and Hazardous Waste. The OB/OD area is located in the southeast area of the affected emission unit

approximately 1.9 miles west of the affected emission unit east boundary and 1,400 feet north of Durand Road. The 40-acre OB/OD area is oval-shaped, measuring approximately 1,300 feet by 1,800 feet. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.10.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.10.a.2 **Recordkeeping**: For each OB and OD event at the affected emission unit, the permittee shall record the following information: date and time of the event, type of event (OB or OD), general location (OB/OD area or Open Range), UTM coordinates, and a description of the item which was burned or detonated. For each OD on the open range at the affected emission unit, the permittee shall also record the date of UDSHW authorization and a description of why the item which was detonated could not be moved to the OB/OD area. The permittee shall maintain the records in accordance with Provision I.S.1 of this permit.

II.B.10.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.b The following conditions shall exist at the time of each OB and OD event at the approximate location of the event:

a. Mixing height greater than or equal to 500 meters,
b. Wind speed greater than or equal to 3 miles per hour,
c. Wind speed less than or equal to 15 miles per hour, and
d. No air quality advisories or alerts for Tooele County.

Each event shall be conducted between 1 hour after sunrise and 1 hour before sunset.. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.10.b.1 **Monitoring**: Within one hour of each event, the permittee shall evaluate compliance with the requirements of this provision using data collected at the location of the event and/or data collected at a location with conditions representative of those at the location of the event.

II.B.10.b.2 **Recordkeeping**: For each event, the permittee shall record the following information: date and time of event, results of the monitoring, and a description of each test method and/or data source used to evaluate compliance with this provision. The records shall be kept in accordance with Provision I.S.1 of this permit.

II.B.10.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10.c The permittee shall conduct each OB and OD event in accordance with the current sound focusing mitigation plan (SFMP) as approved by the executive secretary. The SFMP shall include procedures to minimize the effects of over pressure on people outside the DPG boundary. The plan shall contain specific criteria that will be used to decide whether or not to proceed with each OB and OD event. If a nuisance as defined in Section 76-10-803 is created by an OB event, the OB portion of the SFMP shall be revised and approved by the executive secretary before conducting any additional OB events. If a nuisance as defined in Section 76-10-803 is created by an OD event, the OD portion of the SFMP shall be revised and approved by the executive secretary before conducting any additional OD events.

[Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.10.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.10.c.2 **Recordkeeping**: Records of all actions taken to implement the sound focusing mitigation plan (SFMP) shall be maintained and include the date and time the action was taken along for the reason(s) for implementing the specific action. These records and the current SFMP shall be shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.10.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11 **Conditions on Open Burn in OB/OD Area (OBOD-1):**

II.B.11.a Net explosive weight shall be no greater than 1000 lbs per event. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.11.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.11.a.2 **Recordkeeping**: The permittee shall keep a log of the net explosive weight of each item destroyed. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11.b Net explosive weight shall be no greater than 3000 lbs per day. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.11.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.11.b.2 **Recordkeeping**: The permittee shall keep a log of the total net explosive weight of items destroyed each day. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11.c Net explosive weight shall be no greater than 30000 lbs per rolling 12 month period. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.11.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.11.c.2 **Recordkeeping**: By the 15th day of each month, the permittee shall calculate the total net explosive weight of items destroyed in the previous 12 months. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12 **Conditions on Open Detonation in OB/OD Area (OBOD-2):**

II.B.12.a Net explosive weight shall be no greater than 1500 lbs per event. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.12.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.12.a.2 **Recordkeeping**: The permittee shall keep a log of the net explosive weight of each item destroyed. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.b Net explosive weight shall be no greater than 1500 lbs per day. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.12.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.12.b.2 **Recordkeeping**: The permittee shall keep a log of the total net explosive weight of items destroyed each day. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.c Net explosive weight shall be no greater than 150000 lbs per rolling 12 month period. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.12.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.12.c.2 **Recordkeeping**: By the 15th day of each month, the permittee shall calculate the total net explosive weight of items destroyed in the previous 12 months. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13 **Conditions on Open Detonation on Open Range (OBOD-3):**

II.B.13.a Net explosive weight shall be no greater than 500 lbs per event. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.13.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.13.a.2 **Recordkeeping**: The permittee shall keep a log of the net explosive weight of each item destroyed. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.13.a.3 **Reporting**: There are no reporting requirements for this provision except those

specified in Section I of this permit.

II.B.13.b Net explosive weight shall be no greater than 1031 lbs per day. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.13.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.13.b.2 **Recordkeeping**: The permittee shall keep a log of the total net explosive weight of items destroyed each day. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.13.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13.c Net explosive weight shall be no greater than 50000 lbs per rolling 12 month period. [Authority granted under R307-202-5(3)(d), R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.13.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.13.c.2 **Recordkeeping**: By the 15th day of each month, the permittee shall calculate the total net explosive weight of items destroyed in the previous 12 months. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.13.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14 **Conditions on Bushnell Materiel Test Facility (MTF) (MTF-0):**

II.B.14.a Except when chemical agents are being transported in a double containment system, chemical agents shall only be present at the affected emission unit in the test chambers (MPC, ATC and CSC) and agent repository (AR). Only the following chemical agents shall be present in the test chambers and AR.

GA (Tabun)
GB (Sarin)
GD (Soman)
GF (Cyclosarin)
H (Levenstein Mustard)
HD (Distilled Mustard)
HN1 (Nitrogen Mustard, Type 1)
HN2 (Nitrogen Mustard, Type 2)
HN3 (Nitrogen Mustard, Type 3)
HT (Mustard/T mixture)
L (Lewisite)
VX(Sulfinated Organophosphorus)

Trials and transfer operations with non-agents shall be conducted in the test chambers. The total quantity of test materials used shall be no greater than 30 kg per trial and 360 kg per rolling 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.14.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.14.a.2 **Recordkeeping**: The permittee shall keep the following logs:

a. A log shall be maintained which lists the types and locations (MPC, ATC or CSC) of chemical agents outside the agent repository, other than those being transported in a double containment system, and a log shall be maintained which lists the types of chemical agents inside the agent repository. The logs shall be reviewed at least once each day that operations are conducted and updated anytime the types of chemical agents inside or outside the agent repository changes. Each log shall include the date and time the inventory of chemical agents was revised in each chamber and the agent repository. The log shall also indicate if chemical agents were not present either in the test chambers or agent repository and if chemical agents were present other than those listed in this condition.

b. A log shall be maintained which lists the following for each chemical agent and non-agent trial: date and time trial started and ended, location of the trial, and type and net weight of each chemical agent and non-agent used per day. The log shall be updated at least once each day that chemical agent or non-agent trials are conducted.

c. A log shall be maintained which lists the following for each day that includes non-agent transfers: date and time non-agent transfers started and ended, and were all non-agent transfers conducted inside the test chambers?

Using the recorded information, the permittee shall calculate the total net weight of test materials used per trial and by the 15th of each month the total net weight of test materials used in the previous 12 months. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.14.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.14.b At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5; condition originated in DAQE-390-00]

II.B.14.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.14.b.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.14.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15 **Conditions on MTF Test Chambers (MTF-1):**

II.B.15.a The air pressure in each chamber, except the ATC when test materials are being transported through Airlock B in a double containment system, where test materials are present shall be at least 0.05 inches of water lower than that of each adjacent space. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.a.1 **Monitoring**: When test materials are present in a chamber, the permittee shall:

a. Monitor the pressure differences, expressed in inches of water, between the chamber and each adjacent space at least once every 15 seconds; or

b. Monitor the pressures, expressed in inches of water relative to atmospheric pressure, in the chamber and in each adjacent space at least once every 15 seconds. If the chamber pressure is less than 0.25 inches of water below atmospheric pressure and/or the pressure in one or more adjacent spaces are greater than 0.2 inches of water below atmospheric pressure, an alarm will sound and the permittee shall determine the pressure differences, expressed in inches of water, between the chamber and each adjacent space at least once every 15 seconds during the alarm.

Visual displays shall be located at the operator control board to allow operators to confirm the pressure differential prior to chamber entry or exit. The pressures and/or pressure differences shall be monitored by the centralized computer control system.

II.B.15.a.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.b When test materials are present in a chamber gaseous emissions, except combustion products from internal combustion engines, shall be routed through the PAS before being vented to the atmosphere. During a trial where an internal combustion engine(s) is present in a chamber, the permittee shall prevent the contamination of the internal combustion engine intake air, fuel, and combustion products by test materials using the following methods:

a. Fuel for the internal combustion engine shall be provided from either an internal fuel tank or a source that is external to the chamber.

a.1 When fuel is supplied by a source that is external to the chamber, the fuel shall be supplied to the engine within a sealed line to eliminate any potential for contamination by test materials.

a.2 When the internal combustion engine is operated from an internal fuel tank, all of the fuel shall be consumed prior to the end of the trial.

b. Intake air to the internal combustion engine shall be supplied by a source that is external to the chamber. The air supply line shall be sealed to eliminate any potential contamination by test materials.

c. Internal combustion engine combustion products shall be routed to the TPAD before being vented to the atmosphere. The combustion products line shall be sealed to eliminate any potential

contamination by test materials. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.b.1 **Monitoring**: Before starting a trial which will include one or more internal combustion engine(s), the permittee shall check to ensure that all:

a. Fuel will be supplied through one or more sealed lines from a source that is external to the chamber where the trial will be conducted and/or from one or more internal fuel tanks;

b. Intake air will be supplied through one or more sealed lines from a source that is external to the chamber where the trial will be conducted; and

c. Combustion products will be exhausted through one or more sealed lines to the TPAD.

In addition, the permittee shall conduct a visual inspection of the fuel and intake air supply lines, and combustion product exhaust lines to check for defects that could result in the contamination of fuel, intake air, and/or combustion products by test materials. Defects include, but are not limited to, visible cracks, holes, or gaps in duct work or piping; loose connections; or broken or missing caps or other closure devices. In the event that a defect is found, the permittee shall repair the defect before beginning the trial. Before a trial is complete the permittee shall check to ensure that all fuel in internal fuel tanks has been consumed.

II.B.15.b.2 **Recordkeeping**: The permittee shall record the date, time, locations and results of each inspection required under this provision. The records shall be maintained in accordance with provisions of Section I.S.1 of this permit.

II.B.15.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.c Test material emissions from the TPAD shall not exceed the following concentrations limits:

Test Material	Concentration Limit [1], mg/m^3
AC	0.3
CG	0.3
CK	0.3
DMMP	0.3
DEM	0.3
GA	0.0003
GB	0.0003
GD	0.0001
GF	0.0003
H	0.03
HD	0.03
HN1	0.03
HN2	0.03
HN3	0.03

HT	0.03
L	0.03
VX	0.0003

[1] Limits are instantaneous. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.c.1 **Monitoring**: a. Miniaturized Continuous Air Monitoring Systems (Mini-CAMSs) shall be used to determine the concentration of test materials. Each mini-CAMS shall be capable of detecting and quantifying test material concentrations at each sample location at levels less than the concentration limits given in this condition.

b. Sample Location. Sampling by Mini-CAMS shall be at a representative location in the TPAD stack.

c. Sample Period and Frequency. When a test material with a TPAD emission limit is present in a chamber with internal combustion engines, Mini-CAMS samples shall be collected at least every 6 minutes.

d. Analysis Frequency. Each Mini-CAMS sample shall be analyzed within 6 minutes for the concentration of each test material with a TPAD emission limit present in a chamber with internal combustion engines.

e. Calibration. The mini-CAMS readings shall be accurate to within plus or minus 25 percent for each test material at the concentration limit. The mini-CAMS shall be calibrated for all applicable test materials against primary standards at least once each day that operations are conducted. The primary standard shall be established by Dugway Proving Ground and shall be submitted to the Executive Secretary for approval.

II.B.15.c.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.c.3 **Reporting**: In addition to the reporting requirements of Section I of this permit, all instances of a test material exceeding an emission limit shall be reported to the Executive Secretary verbally within three hours of the exceedance, if reasonable, but in no case longer than 18 hours after the beginning of the exceedance. During times other than normal office hours, exceedances shall be initially reported to the Environmental Health Emergency Response Coordinator.

Within seven calendar days of a test material exceeding an emission limit, a written report shall be submitted to the Executive Secretary. The report shall include the estimated quantity of test material emitted to the atmosphere.

II.B.15.d The chamber concentration of each test material shall not exceed 1000 mg/m^3, except VX shall not exceed 50 mg/m^3. Test material emissions from the PAS shall not exceed the following concentrations limits [2]:

Test Material	Concentration Limit [1], mg/m^3
AC	0.3
CG	0.3
CK	0.3
DMMP	0.3
DEM	0.3
GA	0.0003
GB	0.0003
GD	0.0001
GF	0.0003
H	0.03
HD	0.03
HN1	0.03
HN2	0.03
HN3	0.03
HT	0.03
L	0.03
VX	0.0003

[1] Limits are instantaneous
[2] MTF Test Chamber test material emission concentrations, except test material emissions from internal combustion engines, are equal to test material concentrations after the PAS fifth carbon filter.
[Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.d.1 **Monitoring**: a. Test Materials with PAS Emission Limits.

a.1 Miniaturized Continuous Air Monitoring Systems (Mini-CAMSs) shall be used to determine the concentration of test materials. Each mini-CAMS shall be capable of detecting and quantifying test material concentrations at each sample location at levels less than the breakthrough concentrations given in this condition.

a.2 Sample Locations. Sampling by Mini-CAMS shall be at a representative location in each chamber and after each successive PAS carbon filter bank. All mini-CAMS required by this provision shall be located such that an inspector/operator can safely read the output as required.

a.3 Sample Period and Frequency. When a test material with a PAS emission limit is present in a chamber, Mini-CAMS samples shall be collected at least every 6 minutes as follows:

i. At the chamber sample location;
ii. After the first carbon filter bank;
iii. After the second carbon filter bank if a breakthrough concentration is exceeded after the first carbon filter bank;
iv. After the third carbon filter bank if a breakthrough concentration is exceeded after the second carbon filter bank;
v. After the fourth carbon filter bank if a breakthrough concentration is exceeded after the third carbon filter bank; and

vi. After the fifth carbon filter bank if a breakthrough concentration is exceeded after the fourth carbon filter bank.

a.4 Analysis Frequency. Each Mini-CAMS sample shall be analyzed within 6 minutes for the concentration of each test material present in the chambers with a PAS emission limit.

a.5 Calibration. The mini-CAMS readings shall be accurate to within plus or minus 25 percent for each test material at the breakthrough concentration and emission limit. The mini-CAMS shall be calibrated for all applicable test materials against primary standards at least once each day that operations are conducted. The primary standard shall be established by Dugway Proving Ground and shall be submitted to the Executive Secretary for approval.

a.6 Breakthrough Concentration. Breakthrough is defined as when a test material is detected at or above the following concentrations on the exhaust side of a carbon filter.

Test Material	Breakthrough Concentration, mg/m^3 [1]
AC	0.02
CG	0.02
CK	0.02
DMMP	0.2
DEM	0.2
GA	0.0003
GB	0.0002
GD	0.00006
GF	0.0002
H	0.02
HD	0.02
HN1	0.02
HN2	0.02
HN3	0.02
HT	0.02
L	0.02
VX	0.00002

i. Once a filter breakthrough concentration is observed beyond the PAS third carbon filter bank, preparation for test shutdown shall begin.
ii. If a filter breakthrough concentration is observed beyond the PAS fourth carbon filter bank testing shall be immediately stopped.

b. Test Materials without PAS Emission Limits.

b.1 The permittee shall monitor the chamber concentrations of test materials without PAS emission limits by Mini-CAMS as described below (see b.1.i through iv) or using the following procedure: divide the total quantity of test material to be used over the trial by the applicable chamber

volume. If used, each mini-CAMS shall be capable of detecting and quantifying test material concentrations at each sample location at levels less 1000 mg/m^3 as follows:

b.1.i Sample Locations. Sampling by Mini-CAMS shall be at a representative location in each chamber. All mini-CAMS required by this provision shall be located such that an inspector/operator can safely read the output as required.

b.1.ii Sample Period and Frequency. When a test material without a PAS emission limit is present in a chamber, samples shall be collected at least every 6 minutes.

b.1.iii Analysis Frequency. Each Mini-CAMS sample shall be analyzed within 6 minutes for the concentration of each applicable test material.

b.1.iv Calibration. The mini-CAMS readings shall be accurate to within plus or minus 25 percent for each test material at 1000 mg/m^3. The mini-CAMS shall be calibrated for all applicable test materials against primary standards at least once each day that agent operations are conducted. The primary standard shall be established by Dugway Proving Ground and shall be submitted to the Executive Secretary for approval.

II.B.15.d.2 **Recordkeeping**: As applicable, the permittee shall record the date and time that preparation for test shutdown began, and the date and time that testing stopped. The permittee shall also record the calculations and assumptions used to compute test material chamber concentrations. These records shall be maintained as described in Provision I.S.1.

II.B.15.d.3 **Reporting**: In addition to the reporting requirements of Section I of this permit, all instances of a test material exceeding an emission limit shall be reported to the Executive Secretary verbally within three hours of the exceedance, if reasonable, but in no case longer than 18 hours after the beginning of the exceedance. During times other than normal office hours, exceedances shall be initially reported to the Environmental Health Emergency Response Coordinator.

Within seven calendar days of a test material exceeding an emission limit, a written report shall be submitted to the Executive Secretary. The report shall include the estimated quantity of test material emitted to the atmosphere.

II.B.15.e Visible emissions shall be no greater than 0 percent opacity from the PAS. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.e.1 **Monitoring**: An opacity determination shall be conducted once in each quarter that a trial is conducted at the MTF. The opacity determination shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. The opacity determination shall be conducted during a trial.

II.B.15.e.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.e.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.f Visible emissions shall be no greater than 0 percent opacity from the TPAD. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.f.1 **Monitoring**: An opacity determination shall be conducted once per day when the affected emission unit is operating by the procedures in 40 CFR 60, Appendix A, Method 9.

II.B.15.f.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.15.f.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.15.g When test materials are present in a test chamber, MTF exhaust air shall be heated if necessary to reduce relative humidity below 80 percent before it is routed through the PAS. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.15.g.1 **Monitoring**: The permittee shall continuously monitor the relative humidity and the temperature when test materials are present in a test chamber, and/or when a test material(s) is present in the AR and PAS fan is operating. If the relative humidity exceeds 55 percent an alarm shall sound, and corrective action shall be implemented.

II.B.15.g.2 **Recordkeeping**: Continuous recording of the monitoring device is not required; however, records of all alarm events and the correction action shall be maintained according to the Provision I.S.1 of this permit.

II.B.15.g.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16 **Conditions on MTF Agent Repository (AR) (MTF-5):**

II.B.16.a The air pressure in the agent repository, except when chemical agents are being transported into or out of the agent repository in a double containment system, when chemical agents are present shall be at least 0.05 inches of water lower than that of each adjacent space. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.16.a.1 **Monitoring**: Each pressure difference shall be continuously monitored by the centralized computer control system at least once every 15 seconds when test materials are present. Visual displays shall be located at the operator control board to allow operators to confirm the pressure differential prior to chamber entry or exit.

II.B.16.a.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.16.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.16.b Chemical agent emissions from the AR shall not exceed the following concentration limits [2]:

Agent	Concentration Limit [1], mg/m^3
GA	0.0003
GB	0.0003
GD	0.0001
GF	0.0003
H	0.03
HD	0.03
HN1	0.03
HN2	0.03
HN3	0.03
HT	0.03
L	0.03
VX	0.0003

[1] Limits are instantaneous
[2] AR agent emission concentrations are equal to agent concentrations after the PAS fifth carbon filter when the PAS is used or to agent concentrations after the RPAS second carbon filter when the RPAS is used. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.16.b.1 **Monitoring**: a. When Chemical Agents Present in AR and AR Emissions Controlled by PAS.

a.1 Miniaturized Continuous Air Monitoring Systems (Mini-CAMSs) shall be used to determine the concentration of chemical agents. Each mini-CAMS shall be capable of detecting and quantifying chemical agent concentrations at each sample location at levels less than the breakthrough concentrations given in this condition.

a.2 Sample Locations. Sampling by Mini-CAMS shall be at a representative location in the AR and after each successive PAS carbon filter bank. All mini-CAMS required by this provision shall be located such that an inspector/operator can safely read the output as required.

a.3 Sample Period and Frequency. When a chemical agent is present in the AR and AR exhaust air is ducted to the PAS, Mini-CAMS samples shall be collected at least every 6 minutes as follows:

i. At the AR sample location;
ii. After the first carbon filter bank if a breakthrough concentration is exceeded in the AR;
iii. After the second carbon filter bank if a breakthrough concentration is exceeded after the first carbon filter bank;
iv. After the third carbon filter bank if a breakthrough concentration is exceeded after the second carbon filter bank;
v. After the fourth carbon filter bank if a breakthrough concentration is exceeded after the third carbon filter bank; and

vi. After the fifth carbon filter bank if a breakthrough concentration is exceeded after the fourth carbon filter bank.

a.4 Analysis Frequency. Each Mini-CAMS sample shall be analyzed within 6 minutes for the concentration of each chemical agent present in the AR.

a.5 Calibration. The mini-CAMS readings shall be accurate to within plus or minus 25 percent for each chemical agent at the breakthrough concentration and emission limit. The mini-CAMS shall be calibrated for all applicable chemical agents against primary standards at least once each day that chemical agents are stored in the agent repository. The primary standard shall be established by Dugway Proving Ground and shall be submitted to the Executive Secretary for approval.

a.6 Breakthrough Concentration. Breakthrough is defined as when a chemical agent is detected at or above the following concentrations on the exhaust side of a carbon filter or in the AR. Once a filter breakthrough concentration is observed beyond the PAS fourth carbon filter bank, AR air emissions shall be ducted to the RPAS.

Chemical Agent	Breakthrough Concentration, mg/m^3 [1]
GA	0.0003
GB	0.0002
GD	0.00006
GF	0.0002
H	0.02
HD	0.02
HN1	0.02
HN2	0.02
HN3	0.02
HT	0.02
L	0.02
VX	0.00002

b. When Chemical Agents Present in AR and AR Emissions Controlled by RPAS.

b.1 Miniaturized Continuous Air Monitoring Systems (Mini-CAMSs) shall be used to determine the concentration of chemical agents. Each mini-CAMS shall be capable of detecting and quantifying chemical agent concentrations at each sample location at levels less than the breakthrough concentrations given in this condition.

b.2 Sample Locations. Sampling by Mini-CAMS shall be at a representative location in the AR and after each successive RPAS carbon filter bank. All mini-CAMS required by this provision shall be located such that an inspector/operator can safely read the output as required.

b.3 Sample Period and Frequency. When a chemical agent is present in the AR and AR exhaust air is ducted to the RPAS, Mini-CAMS samples shall be collected at least every 6 minutes as follows:

i. At the AR sample location;
ii. After the first carbon filter bank if a breakthrough concentration is exceeded in the AR; and
iii. After the second carbon filter bank if a breakthrough concentration is exceeded after the first carbon filter bank.

b.4 Analysis Frequency. Each Mini-CAMS sample shall be analyzed within 6 minutes for the concentration of each chemical agent present in the AR.

b.5 Calibration. The mini-CAMS readings shall be accurate to within plus or minus 25 percent for each chemical agent at the breakthrough concentration and emission limit. The mini-CAMS shall be calibrated for all applicable chemical agents against primary standards at least once each day that chemical agents are stored in the agent repository. The primary standard shall be established by Dugway Proving Ground and shall be submitted to the Executive Secretary for approval.

b.6 Breakthrough Concentration. Breakthrough is defined as when a chemical agent is detected at or above the breakthrough concentrations listed in this condition on the exhaust side of a carbon filter or in the AR. Once a filter breakthrough concentration is observed beyond the RPAS first carbon filter bank, AR air emissions shall be ducted to the PAS.

II.B.16.b.2 **Recordkeeping**: The permittee shall record the time periods when AR air emissions are ducted to the PAS and the time periods when AR air emissions are ducted to the RPAS. These records shall be maintained as described in Provision I.S.1.

II.B.16.b.3 **Reporting**: In addition to the reporting requirements of Section I of this permit, all instances of a chemical agent exceeding an emission limit shall be reported to the Executive Secretary verbally within three hours of the exceedance, if reasonable, but in no case longer than 18 hours after the beginning of the exceedance. During times other than normal office hours, exceedances shall be initially reported to the Environmental Health Emergency Response Coordinator.

Within seven calendar days of a chemical agent exceeding an emission limit, a written report shall be submitted to the Executive Secretary. The report shall include the estimated quantity of test material emitted to the atmosphere.

II.B.16.c Visible emissions shall be no greater than 0 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.16.c.1 **Monitoring**: An opacity determination shall be conducted once in each quarter that chemical agents are stored in the agent repository and the RPAS is operated. The opacity determination shall be conducted in accordance with

40 CFR 60, Appendix A, Method 9. The opacity determination shall be conducted while a chemical agent is stored in the agent repository and the RPAS operates.

II.B.16.c.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.16.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.17 **Conditions on MTF Thermal Pollution Abatement Device (MTF-8):**

II.B.17.a Hours of operation shall be no greater than 1000 hours per rolling 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.17.a.1 **Monitoring**: By the 15th day of each month, the permittee shall calculate the total hours of operation in the previous 12 months for each affected emission unit or all affected emission units, as applicable. Hours of operation for each affected emission unit shall be determined by an hour meter and/or a log.

II.B.17.a.2 **Recordkeeping**: Records shall be kept on a monthly basis for each affected emission unit during operations. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.17.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.18 **Conditions on Lothram Salomon Life Science Test Facility (LSTF) (LSTF-0):**

II.B.18.a No biological agents with a biosafety level (BL) higher than 3 shall be present at the affected emission unit. Except when being transported in a double containment system, BL 3 agents shall only be present at the affected emission unit in the LSTF containment area. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.18.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.18.a.2 **Recordkeeping**: A log shall be maintained which lists the BL 3 or higher agents outside the containment area, other than those being transported in a double containment system, and a log shall be maintained which lists the BL 3 or higher agents inside the containment area. The logs shall be reviewed at least once each day that operations are conducted and updated anytime the BL 3 or higher agents inside or outside the containment area changes. Each log shall include the date and time the inventory of biological agents was revised and the biosafety level of each agent shall be identified. The records shall be maintained in accordance with provisions of Section I.S.1 of this permit.

II.B.18.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.18.b At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control

equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5; condition originated in DAQE-390-00]

II.B.18.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.18.b.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.18.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.18.c BL2 operations which include procedures with a high potential for creating infectious aerosols and/or high concentrations or large volumes of etiologic agents shall be conducted as follows:

a. In a Type A or B Class II BSC. Class II BSCs shall be certified in accordance with the requirements of 32 CFR 627.51; and

b. BL2 agents shall be inside the BSC at least 20 cm away from the BSC face and the BSC shall have a minimum face velocity of 75 lfpm for Type A or 100 lfpm for Type B. [Authority granted under R307-401(6) [BACT]; condition originated in DAQE-390-00]

II.B.18.c.1 **Monitoring**: The permittee shall conduct the following monitoring for each Class II BSC where operations subject to this condition are conducted:

a. Instantaneous during operations

Each BSC will be equipped with an audible alarm which will instantaneously (within at least 15 seconds) give a warning if the face velocity is less than 75 lfpm for Type A BSCs and 100 lfpm for Type B BSCs. During operations subject to this condition, the alarm on the BSC shall be operational.

b. Annually.

The following shall be performed at least once annually when operations subject to this condition were conducted at any time during the annual period and prior to conducting BL2 operations subject to this condition after major repairs:

b.1 For Class II BSCs, the velocity profile and work access opening air flow (face velocity) test shall be conducted in accordance with National Sanitation Foundation (NSF) Standard No. 49 (latest revision, June 1987); and

b.2 Each BSC audible alarm shall be tested to ensure proper operation.

II.B.18.c.2 **Recordkeeping**: The permittee shall maintain the following logs for the LSTF:

a. An annual log shall be maintained which includes the following information:

a.1 Date and time the annual period started and ended;
a.2 One of the following:
i No operations subject to this condition were conducted over the annual period; or
ii Operations subject to this condition were conducted during the annual period.

Note: The following information should only be included if operations subject to this condition were conducted at any time during the annual period

a.3 Results of the alarm evaluation and face velocity for each BSC used to conduct operations subject to this condition. Each result shall be listed with the BSC identification and measurement date; and
a.4 Were all operations subject to this condition conducted in a Type A or B Class II BSC?

b. For each day that includes BL2 operations subject to this condition a log shall be maintained which includes the following for each BSC in which BL2 operations subject to this condition were conducted:

b.1 BSC identification;
b.2 Date;
b.3 Were alarms on BSC operational during BL2 operations subject to this condition?;
b.4 Were all operations subject to this condition conducted inside the BSC at least 20 cm away from the BSC face?;
b.5 Was the certification on the BSC current?.

These records shall be maintained as described in Provision I.S.1.

II.B.18.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.19 **Conditions on LSTF Containment Area (CA) (LSTF-1):**

II.B.19.a Visible emissions shall be no greater than 0 percent opacity from the ventilation system. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.19.a.1 **Monitoring**: An opacity determination shall be conducted once in each quarter that an operation (i.e., experiment, transfer, etc.) is conducted in the LSTF Containment Area. The opacity determination shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. The opacity determination shall be conducted during an operation in the LSTF Containment Area.

II.B.19.a.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.19.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.19.b The following requirements shall apply to the containment area:

a. BL3 operations shall be conducted in a room in a Type A or B Class II BSC or a Class III BSC. Class II BSCs shall be certified in accordance with the requirements of 32 CFR 627.51. Class III BSCs shall be certified in accordance with the requirements of 32 CFR 627.52;

b. Pathogen aerosol operations shall be conducted in room 910 in a Class III BSC. These operations shall be limited to 4380 hours per year;

c. When BL3 agents are present in the containment area, the air pressure in each containment area room will be maintained at least 0.05 inches of water lower than that of each adjacent space;

d. When BL3 agents are present in a Class II BSC, the BL3 agents shall be at least 20 cm away from the BSC face and the BSC shall have a minimum face velocity of 75 lfpm for Type A or 100 lfpm for Type B;

e. When BL3 agents are present in a Class III BSC, the air pressure inside the BSC shall be at least 0.5 inches of water lower than the air pressure in the surrounding room;

f. During BL3 operations in a room, all doors shall be closed; and

g. When BL3 agents are present in the containment area, the pressure drop across each operating ventilation system HEPA filter bank shall be greater than 0.5 inches of water and less than 5 inches of water. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.19.b.1 **Monitoring**: The permittee shall conduct the following monitoring for the containment area:

a. Instantaneous when BL3 agents present

Each Class II and III BSC will be equipped with an audible alarm which will instantaneously (within at least 15 seconds) give a warning if the face velocity is less than 75 lfpm for Class II Type A BSCs and 100 lfpm for Class II Type B BSCs or the air pressure inside a Class III BSC is less than 0.5 inches of water lower than the surrounding room. When BL3 agents are present in a BSC, the alarms on the BSC shall be operational.

The containment area ventilation system shall be equipped with an audible alarm which will instantaneously (within at least 15 seconds) give a warning if the air pressure inside a room is less than 0.05 inches of water lower than the adjacent spaces, and/or the pressure drop across one or more ventilation system HEPA filter banks is less than 0.5 inches of water or greater than 5 inches of water. When BL3 agents are present in the containment area, the alarms on the ventilation system shall be operational.

b. Semi-annual when BL3 agents present.

The following shall be performed at least once per semi-annual period when BL3 agents are present during the semi-annual period and prior to conducting BL3 agent operations after major repairs:

b.1 The difference in air pressure between the each room and each adjacent space shall be measured and the pressure drop across each ventilation system HEPA filter bank shall be measured;

b.2 For Class II BSCs, the velocity profile and work access opening air flow (face velocity) test shall be conducted in accordance with National Sanitation Foundation (NSF) Standard No. 49 (latest revision, June 1987).

b.3 For Class III BSCs, the pressure difference between the BSC and surrounding room shall be monitored.

b.4 Each BSC audible alarm and the ventilation system audible alarm shall be tested to ensure proper operation.

II.B.19.b.2 **Recordkeeping**: The permittee shall maintain the following logs for the containment area:

a. For each semi-annual period a log shall be maintained which includes the following information:

a.1 Date and time the semi-annual period started and ended;
a.2 One of the following:
i BL3 agents were not present over the semi-annual period;
ii BL3 agents were present at all times during the semi-annual period; or
iii Date and time of each time period when BL3 agents present;

Note: The following information should only be included if BL3 agents were present at any time during the semi-annual period

a.3 Were the alarms on the ventilation system operational for each time period when BL3 agents were present?;
a.4 Result of the alarm evaluations for ventilation system including evaluation date;
a.5 Pressure difference between each room and each adjacent space. Each pressure difference shall be listed with the measurement locations and measurement date;
a.6 Pressure difference drop across each ventilation system HEPA filter bank. The pressure difference shall be listed with the measurement locations and measurement date;
a.7 Were all BL3 operations conducted in a room?;
a.8 Were all pathogen aerosol operations conducted in room 910; and
a.9 Results of the alarm evaluation and face velocity or pressure difference for each BSC. Each result shall be listed with the BSC identification and measurement date

b. For each day that BL3 operations are conducted a log shall be maintained which includes the following for each room in which BL3 operations were conducted:

b.1 Room identification;
b.2 Date;
b.3 Total hours conducting pathogen aerosol work over the day;
b.4 Were all doors to the room closed during each BL3 operation conducted over the day?;
b.5 Were alarms on each BSC operational during BL3 operations?;
b.6 Were all equipment/supplies contaminated with BL3 agents inside Class II BSCs at least 20 cm away from the BSC face and/or inside a Class III BSC?;
b.7 Was pathogen aerosol work conducted inside a Class III BSC?; and
b.8 Were certifications on each BSC current?.

By the 15th of each month the permittee shall calculate the total hours of operation with pathogen aerosols in the previous 12 months in room 910.

These records shall be maintained as described in Provision I.S.1.

II.B.19.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.20 **Conditions on Liquid Nitrogen Cryofracture Test Facility (LNCTF) (LNCTF-0):**

II.B.20.a At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5; condition originated in DAQE-390-00]

II.B.20.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.20.a.2 **Recordkeeping**: Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.20.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.21 **Conditions on LNCTF Propane-Fired Furnace (LNCTF-3):**

II.B.21.a Propane consumption shall be no greater than 24000 gallons per rolling 12-month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.21.a.1 **Monitoring**: By the 15th day of each month, the permittee shall calculate the total volume of fuel consumed in the previous 12 months. Fuel consumption for each affected emission unit shall be determined by a fuel meter and/or log.

II.B.21.a.2 **Recordkeeping**: Records of fuel consumption shall be kept on a monthly basis for each affected emission unit. Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.21.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.21.b Net weight of explosives burned shall be no greater than 50 pounds per day. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.21.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.21.b.2 **Recordkeeping**: The permittee shall keep a log of the net weight of explosives burned each day. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.21.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.21.c Net weight of explosives burned shall be no greater than 2000 pounds per 12 month rolling total. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.21.c.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.21.c.2 **Recordkeeping**: By the 15th day of each month, the permittee shall calculate the total net explosive weight of items destroyed in the previous 12 months. The records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.21.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.21.d Visible emissions shall be no greater than 20 percent opacity when burning munitions. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-390-00]

II.B.21.d.1 **Monitoring**: An opacity determination of the affected emission unit shall be performed in each day when munitions are being burned. The opacity determination shall be performed in accordance with 58 FR 61640 Method 203C. Opacity observations will be recorded at 15-second intervals over the duration of the munitions burn representative of the munitions burns which will be conducted in the same day. Data reduction procedures for instantaneous limitation regulations in 58 FR 61640 Method 203C shall be followed except readings with no visible emissions shall not be included in the 1-minute averages.

II.B.21.d.2 **Recordkeeping**: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.21.d.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.22 **Conditions on Underground Storage Tanks (TNK-1):**

II.B.22.a The permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the

source. [Authority granted under 40 CFR 60.112b(b); condition originated in 40 CFR 60 Subpart Kb]

II.B.22.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.22.a.2 **Recordkeeping**: A copy of the required records shall be maintained and made available to the Executive Secretary upon request.

II.B.22.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.23 **Conditions on Aboveground Storage Tanks (TNK-2):**

II.B.23.a The permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the source. [Authority granted under 40 CFR 60.112b(b); condition originated in 40 CFR 60 Subpart Kb]

II.B.23.a.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.23.a.2 **Recordkeeping**: A copy of the required records shall be maintained and made available to the Executive Secretary upon request.

II.B.23.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C. **Emissions Trading.** (R307-415-6a(10))
Not applicable to this source.

II.D. **Alternative Operating Scenarios.** (R307-415-6a(9))
Not applicable to this source.

Section III: PERMIT SHIELD

III.A. A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

IV.A. This source is not subject to Title IV. This section is not applicable.

Section V: GLOSSARY.

V.A. Definitions for technical terms used in Section II of this permit.

Adjacent Space – The atmosphere or an area connected to an area by an uncontrolled opening (door, window, vent, defect, etc). Uncontrolled openings are those which are not controlled by a permitted air pollution control device or have not been permanently shut and/or sealed.

Agent – see biological agent and chemical agent. (The references reflect the intent of current U.S. Army definitions for these materials. Any future changes made by the U.S. Army are to be incorporated by default.)

Area – For this permit, area refers to any of the following: chamber, room, corridor, air lock or other enclosed space.

Biological Agent – Biological organisms, such as bacteria or viruses, or products of biological organisms, such as toxins. The CDC applies the term biological agent to all BL categories of biological organisms. See Etiologic Agent.

Biosafety Level (BL) – a combination of facilities, equipment, and procedures used in handling etiologic agents to protect the worker, environment, and the community. This combination is proportional to the potential hazard of the etiologic agent in question.

BL1 – the facilities, equipment, and procedures suitable for work involving agents of no known or of minimal potential hazard to laboratory personnel and the environment.

BL2 – the facilities, equipment, and procedures applicable to clinical, diagnostic, or teaching laboratories, suitable for work involving indigenous agents of moderate potential hazard to personnel and the environment. It differs from BL-1 in that

a. The laboratory personnel have specific training in handling pathogenic agents
b. The laboratory is directed by scientists with experience in the handling of specific agents
c. Access to the laboratory is limited when work is being conducted, and
d. Certain procedures in which infectious aerosols could be created are conducted in biological safety cabinets or physical containment equipment. Personnel must be trained. Strict adherence to recommended practices is as important in attaining the maximum containment capability as is the mechanical performance of the equipment itself.

BL3 – the facilities, equipment, and procedures applicable to clinical, diagnostic, research, or production facilities in which work is performed with indigenous or exotic agents where there is potential for infection by aerosol and the disease may have serious or lethal consequences. It differs from BL-2 in that

a. More extensive training in handling pathogenic and potentially lethal agents is necessary for laboratory personnel,
b. All procedures involving the manipulation of infectious material are conducted within biological safety cabinets or by other physical containment devices,
c. The laboratory has special engineering and design features, including access zones, sealed penetrations, and directional airflow, and
d. Any modification of BL-3 recommendations must be made only by the commander or director

Chamber – engineered room in which trials, storage, and/or transfers using chemical agents and/or non-agents take place.

Chemical agent – a chemical substance which is intended to kill, seriously injure, or incapacitate persons through its physiological effects and which is subject to Army regulations AR 50-1 and AR 385-61. Excluded from consideration are riot control agents, commercially available chemicals, herbicides, smoke, and flame. (Source: AR 385-61.)

Cryofracture – demilitarization method involving freezing a munition in a liquid nitrogen bath followed by fracture of the embrittled items in a hydraulic press.

Defect – includes, but not limited to, visible cracks, holes, or gaps in duct work or piping; loose connections and worn seals; or broken or missing caps or other closure devices.

Detonation – a violent chemical reaction within a chemical compound involving heat and pressure. A detonation proceeds through the reacted material towards the unreacted material at a supersonic velocity. The result of the chemical reaction is exertion of extremely high pressure on the surrounding medium forming a propagating shock wave that originates at supersonic velocity. A detonation, when located at or near the ground surface, usually results in a crater. (Source: AR 385-64. Ammunition and Explosives Safety Standards).

Emission Limits for MTF – concentrations in the atmosphere which may not be exceeded at emission points at the MTF PAS, RPAS, and TPAD. Limits are based on chemical agent criteria found in AR 385-61 Table 2-3. In addition, emission limits are identified for CG (phosgene), CK (cyanogen chloride), and AC (hydrogen cyanide). Emission limits for the MTF are shown in Table 1 (Limits for DMMP and DEM not shown), located at the end of this glossary:

Etiologic agent – a viable microorganism, or its toxin which causes or may cause human disease, and includes those agents listed in 42 CFR 72.3 of the Department of Health and Human Services regulations, and any material of biological origin that poses a degree of hazard similar to those organisms. (Source: AR 385-69)

Experimental chemical agent – Chemical substance being tested, developed, or altered for chemical defense purposes and which has a toxicity equal to or greater than current nerve or mustard agents. (Source: AR 385-61)

Munition – a general term applied to all types of armament, including weapons utilized during combat or designed for training of the armed forces for inflicting or aiding in inflicting damage to the neutralization of enemy personnel, equipment, or facilities. It includes such items as bombs, rockets, missiles, small arms and ammunition, bulk explosives, smoke agents, incendiaries, and non-explosive practice and training devices.

Non-agent – any substance, except chemical agents, listed as a hazardous air pollutant (HAP) and/or that has a biological exposure index.

Obscurant – anthropogenic or naturally occurring particles suspended in air that block or weaken transmission of a portion of the electromagnetic spectrum, such as visible and infrared radiation, or microwaves. (Source: National Research Council (NRC), Toxicity of Military Smokes and Obscurants, 1987)

Operation – Any operation which involves the use (i.e., test, trial, etc) and/or transfer of chemical agents, biological agents, and/or non-agents.

Pathogen – any biological organism capable of producing disease. (sci)

Permeability – the condition of being permeable, allowing the passage or diffusion of liquids or gases through it. (sci)

Present - For chemical agents, present refers to the time period starting when an agent when first enters an area until all unused agent has been removed from the area and the area has been decontaminated to 3X levels. For biological agents, present refers to the time period starting when an agent when first enters an area until all unused agent has been removed from the area. For non-agents, present refers to the time period starting from when a non-agent trial or transfer operation begins in an area until the operation ends.

Smoke – Airborne material generated as an obscurant by burning or vaporizing some product. (Source: NRC, 1987)

Source emission limit – chemical agent airborne exposure limit attainable by a well designed and well operated incineration facility. Source emission limits are listed in Table 2-3 of AR 385-61.

Test – a uniquely named, customer funded program, generally involving multiple phases or trials. Each test will have a test plan developed to describe the operational theory of a specific test item and to define the general goals and specific requirements of collecting data to validate the operational theory and quantify the actual performance of the item against varying conditions and environments. (Source: Dugway)

Test material – chemical agent or non-agent as defined in this glossary.

Toxin – any chemical causing an adverse effect on a living organism.

Trial – an individual event within a given test that is defined as the use of test material(s) within a containment system (chamber, hood, fixture, disseminator, reactor, etc.) to test an item, with the intent to gather a separate and uniquely definable set of data. Independent trials are defined by parameters including but not limited to temperature, humidity, flow, differential pressure, test material type, duration, and target concentration values. (Source: Dugway)

Transfer operation – an activity where a test material will be transferred from one container to another.

Table 1. MTF Emission Limits.

MTF Emission Limits	**Chemical Agent**							**Non-agent**
Source of Values	**AR 385-61**					**Treat as HD**	**Treat as GB**	**DAQE-130-00**
Chemical	**GD**	**GA/GB**	**VX**	**H, HD, HT**	**L**	**HN1, HN2, HN3**	**GF**	**AC,CG,CK**
Source Emission Limit (equals PAS, RPAS, & TPAD Emission Limits), **mg/m^3**	0.0001	0.0003	0.0003	0.03	0.03	0.03	0.0003	0.3

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-390-00 dated October 26, 2000

1: Comment on an item originating in Title V application regarding permitted source (Source-wide):

Emission units listed in DPGs Title V application have been divided into three groups: (1) Nongrandfathered emission units (emission units which were not in existence prior to November 29, 1969, and/or have been modified after November 29, 1969); (2) grandfathered emissions units (emission units which were in existence prior to November 29, 1969, and have not been modified after November 29, 1969) with applicable requirements; and (3) grandfathered emission units without applicable requirements. The following emission units are included in Group 1: Bushnell Materiel Test Facility (MTF), Combined Chemical Laboratory Facility (CCLF), Lothram Salomon Life Science Test Facility (LSTF), Liquid Nitrogen Cryofracture Test Facility (LNCTF), Open Burn and Open Detonation, Smoke and Obscurant Testing, four 20,000 gallon fuel oil tanks subject to 40 CFR 60 Subpart kb, and two 24,000 gallon JP4 tanks subject to 40 CFR 60 Subpart kb.

Under R307-401-1(2), group 2 emissions units are not required to obtain an approval order. All Group 2 units are subject to one or more applicable requirements including visible emissions and/or fuel sulfur content.

Group 3 emission units are not subject to any applicable requirements including visible emissions and/or fuel sulfur content. Group 3 includes the following emission unit categories:

*All photographic processing units including: RA-4, C41, VNF, E6 and RPX OMAT. These units consist of a combination of developers, bleaches, fixers, stop baths, and stabilizers. Emissions result from the use of chemicals which are vented with ceiling and roof exhausts. Since none of the photographic processing units listed in the application are listed in an approval order, it is assumed that these units are grandfathered.

*All degreaser process units. Degreasing is conducted in Safety Kleen Cold Cleaners. According to a letter dated February 7, 2000, certified by the Responsible Official, DPG does not use any solvent containing halogenated HAPs. Therefore, the degreasers are not subject to 40 CFR 63 Subpart T, "National Emission Standards for Halogenated Solvent Cleaning". Since none of the degreaser processing units listed in the application are listed in an approval order, it is assumed that these units are grandfathered.

*All fuel dispensing units. Fuels are dispensed at multiple locations around the installation. Fuels dispensed include JP-4, motor gas and diesel. Fuel is transferred through hose and nozzle arrangements. Since none of the fuel dispensing units listed in the application are listed in an approval order, it is assumed that these units are grandfathered.

*All sewage lagoons. Chlorination is used at several sewage lagoons at DPG. Emissions result from the volatilization of chlorine from open lagoons. According to a letter dated February 7, 2000, certified by the Responsible Official, DPG's lagoons don't meet the applicability criterial of 40 CFR 63 Subpart VVV, "National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works". Since none of the lagoons listed in the application are listed in an approval order, it is assumed that the lagoons are grandfathered.

*All chlorine and other chemical dispensing activities not covered by an approval order. Chlorine and other chemical dispensing occurs at various locations at DPG. Emissions occur during the dispensing and mixing of various chemicals. Since some of the chlorine and other chemical dispensing activities are not listed in an approval order, it is assumed that these chemical dispensing activities are grandfathered.

*Aeration of Petroleum-Contaminated Soils. At DPG there have been a few underground storage tank removals where petroleum-contaminated soils have been discovered. These soils have been removed from their original location and moved to a lined area west of Fries Park. Since the soil aeration activities are not listed in an approval order, it is assumed that the aeration activities are grandfathered.

*Defensive Test Chamber. The Defensive Test Chamber (DTC) is located in the Carr area at DPG. Testing with simulants is conducted at the DTC and emissions are controlled with HEPA and carbon filters in series.

*Grandfathered, gas-fired internal combustion engines. These engines are not subject to the visible emission or fuel sulfur content regulations.

Based on a review of the application, all emission units as DPG should be covered by these three groups.

2: Comment on an item originating in Title V application regarding permitted source (Source-wide):

Dry Cleaning Machine Removed: Dugway's permit application identified a dry cleaning machine. The machine has been removed from the site and all dry cleaning is now done offsite. [Comment last updated on 10/18/2000]

3: Comment on an item originating in Title V application regarding permitted source (Source-wide):

Building 2048 Boilers Out of Service: Four Fuel Oil No. 2 boilers are located in Building 2048. These boilers are subject 40 CFR 60 Subpart Dc according an application update sent by DPG dated December 8, 1999. These boilers are not listed in an approval order and are no longer being used (see DAQC-482-2000). Therefore, the four boilers located in Building 2048 have not been listed as emission units in this permit. Before the facility uses these boilers all permits required under R307 must be obtained by the facility. [Comment last updated on 5/08/2000]

4: Comment on an item originating in Title V application regarding permitted source (Source-wide):

Sulfur content and visible emission requirements for JP4 and mogas fired internal combustion engines: Fuel sulfur content and visible emissions for grandfathered mogas and JP4 fired internal combustion engines will be covered by the corresponding requirements for grandfathered gasoline and diesel fired internal combustion engines. [Comment last updated on 10/18/2000]

5: Comment on an item originating in DAQ Note regarding permitted source (Source-wide):

Visual Opacity Surveys and Opacity Observations: Visual opacity surveys and opacity observations which don't need to be conducted by a certified observer should be conducted as follows:

*Each observer shall at least read Method 9 in 40 CFR 60, Appendix A once each quarter and
*Each observation at each emission point shall include at least one momentary observation of emissions. [Comment last updated on 11/14/2000]

6: Comment on an item originating in 40 CFR 82 Subpart B regarding permitted source (Source-wide):

Stratospheric Ozone Motor Vehicle Air Conditioner Servicing: The subject rule is not applicable at the affected emission unit because motor vehicle air conditioners are serviced offsite as indicated in correspondence from the facility dated February 2, 2000. [Comment last updated on 6/13/2000]

7: Comment on an item originating in 40 CFR 82 Subpart D regarding permitted source (Source-wide):

Stratospheric Ozone Federal Procurement: The subject rule is not an applicable requirement at the affected emission unit. [Comment last updated on 2/15/2001]

8: Comment on an item originating in UDAQ/DPG Meeting on January 11, 1995 regarding permitted source (Source-wide):

Residential housing and high school woodshop a separate source.: Residential housing located at Dugway Proving Ground (DPG) will be considered a separate source and not subject to the conditions of this permit. This approach was requested by DPG during a meeting with DAQ on January 20, 1995. The approach is supported in guidance developed by the EPA, Major Source Determinations for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act (ACT), dated August 2, 1996.

The high school woodworking shop located in the English Village at DPG will also be considered a separate source and not subject to the conditions of this permit. The woodworking shop is located at the high school and is only used for educational purposes. This approach is supported by the 1996 EPA guidance. [Comment last updated on 1/04/2001]

9: Comment on an item originating in R307-205-3 regarding permitted source (Source-wide):

R307-205-3, Fugitive Dust, is not an applicable requirement for OB/OD and SOT .: Condition II.B.1.b requires that sources of fugitive dust shall be minimized source-wide in accordance with R307-205-3. While this requirement has been applied source-wide, it only applies to storage and handling of aggregate materials, and construction and demolition activities. OB/OD and SOT do not belong to either of these categories. Therefore, condition II.B.1.b does not apply to OB/OD or SOT. [Comment last updated on 2/27/2001]

10: Comment on an item originating in R307-205-5(3)(d) regarding Open Burn/Open Detonation (Source Wide) (Unit OBOD-0):

Comments on implementation of R307-205-5(3)(d) to OB/OD.: Under section R307-202-5(3)(d) open burning, in remote areas, of highly explosive or other hazardous materials, for which there is no other known practical method of disposal is authorized by the issuance of a permit when not prohibited by other laws or other officials having jurisdiction and when a nuisance as defined in Section 76-10-803 is not created. Permit refers to a variance or approval order.

Approval order DAQE-390-00 was issued on October 26, 2000, to allow DPG to dispose of residual munitions and propellants, explosives, and pyrotechnics using OB/OD. Residual only refers to excess, obsolete, or unserviceable munitions, propellants, explosives, and pyrotechnics. This approval order does not exempt DPG from other laws or the requirements imposed by other officials having jurisdiction. For example, under section R307-202-5(2) the local authority may issue permits under the clearing index system approved and coordinated by the Department of Environmental Quality. Approval order DAQE-390-00 provides site specific limits on several parameters (i.e., mixing height, wind speed, net explosive weight, and time and location of each OB/OD event) rather than clearing index to minimize the dispersion of emissions from OB/OD at DPG.

The issuance of a permit under R307-202-5(3)(d) for OB/OD of the residual munitions and propellants, explosives, and pyrotechnics at DPG is justified because there are no other known practical methods of disposal for these items. Other technologies including those being investigated by the DOE, Army, and Navy are under development (see Federal Remediation Technologies Roundtable at www.frtr.gov). Therefore, OB/OD is currently the only practical method of disposal. [Comment last updated on 2/27/2001]

11: Comment on an item originating in R307-201-1(2) regarding OB/OD and SOT (Unit OBOD-0 and SOT):

R307-201-1(2), Visible Emissions, is not an applicable requirement for OB/OD and SOT.: Under R307-201-1(2) visible emissions from installations constructed after April 25, 1971, except internal combustion engines, or any incinerator shall be of a shade or density no darker than 20% opacity, except as otherwise provided in these regulations. Under R307-305-1, installations constructed before April 25, 1971, except internal combustion engines, shall be of a shade or density no darker than 40% opacity except as provided in these regulations. An installation is a discrete process with identifiable emissions which may be part of a larger industrial plant. It is DAQs interpretation that discrete process refers to an identifiable piece of process equipment. This interpretation is based on a guidance document from the EPA dated October 24, 1980, which defines an installation as an identifiable piece of process equipment. OB/OD and SOT are not process equipment. Therefore, OB/OD and SOT are not discrete processes or installations and R307-201-1(2) and R307-305-1 are not applicable requirements. [Comment last updated on 2/27/2001]

12: Comment on an item originating in R307-205-2 regarding OB/OD and SOT (Unit OBOD-0 and SOT):

R307-205-2, Fugitive Emission, is not an applicable requirement for OB/OD and SOT.: Under R307-205-2, fugitive emissions from sources in areas outside Davis, Salt Lake and Utah Counties, Ogden City and any nonattainment area for PM10 and which were constructed before April 25, 1971, shall not exceed 40% opacity. Fugitive emissions from sources constructed after April 25, 1971, shall not exceed 20% opacity. Fugitive emissions are emissions from an installation or facility which are neither passed through an air cleaning device nor vented through a stack or could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. As discussed previously, OB/OD and SOT are not installations. Facility means machinery, equipment, structures of any part or accessories thereof, installed or acquired for the primary purpose of controlling or disposing of air pollution. OB/OD and SOT are not facilities because they are not installed or acquired for the primary purpose of controlling or disposing of air pollution. Since OB/OD and SOT are not installations or facilities, emissions from OB/OD and SOT are not fugitive emissions. Therefore, R307-205-2 is not an applicable requirement for OB/OD and SOT. [Comment last updated on 2/21/2001]

13: Comment on an item originating in 40 CFR 61 Subpart D regarding Open Burn/Open Detonation (Source Wide) (Unit OBOD-0):

40 CFR 61 Subpart D, National Emission Standard for Beryllium Rocket Motor Firing, is not an applicable requirement for OB/OD.: 40 CFR 61 Subpart D, National Emission Standard for Beryllium Rocket Motor Firing, applies to rocket motor test sites which are defined as any building, structure, facility, or installation where the static test firing of a beryllium rocket motor and/or the disposal of beryllium propellant is conducted. In a document submitted to DAQ on February 2, 2000, DPG has indicated under the certification of the responsible official that this subpart is not an applicable requirement. In an Email submitted to DAQ on February 15, 2000, DPG indicated that none of the propellants used at DPG contain Beryllium . This assessment was based on information contained in document TM 9-1300-214, Chapter 9, entitled “United States Propellants”. This document details the formulation of the propellants used by the military. None of these propellants list Beryllium as a component. [Comment last updated on 2/21/2001]

14: Comment on an item originating in 40 CFR Part 60 Subpart Cc regarding Municipal Solid Waste Landfill (Unit MSWL):

Emission Unit Exempt from Control Requirements: The affected emission unit is subject to R307-221 which provides emission standards for existing municipal solid waste landfills (MSWLF). R307-221 references 40 CFR 60.752 through 60.759 for control requirements. Under these sections, MSWLFs with design capacities less than 2.5 million mega grams are exempt from control requirements. These facilities must provide an initial notification that their design capacity is less than 2.5 million mega grams. The affect emission unit's design capacity is less than 2.5 million mega grams and an initial notification has been filled with UDAQ. Therefore, the requirement to submit an initial notification has not been included in this permit. [Comment last updated on 2/21/2001]